

Saturday Magazine.

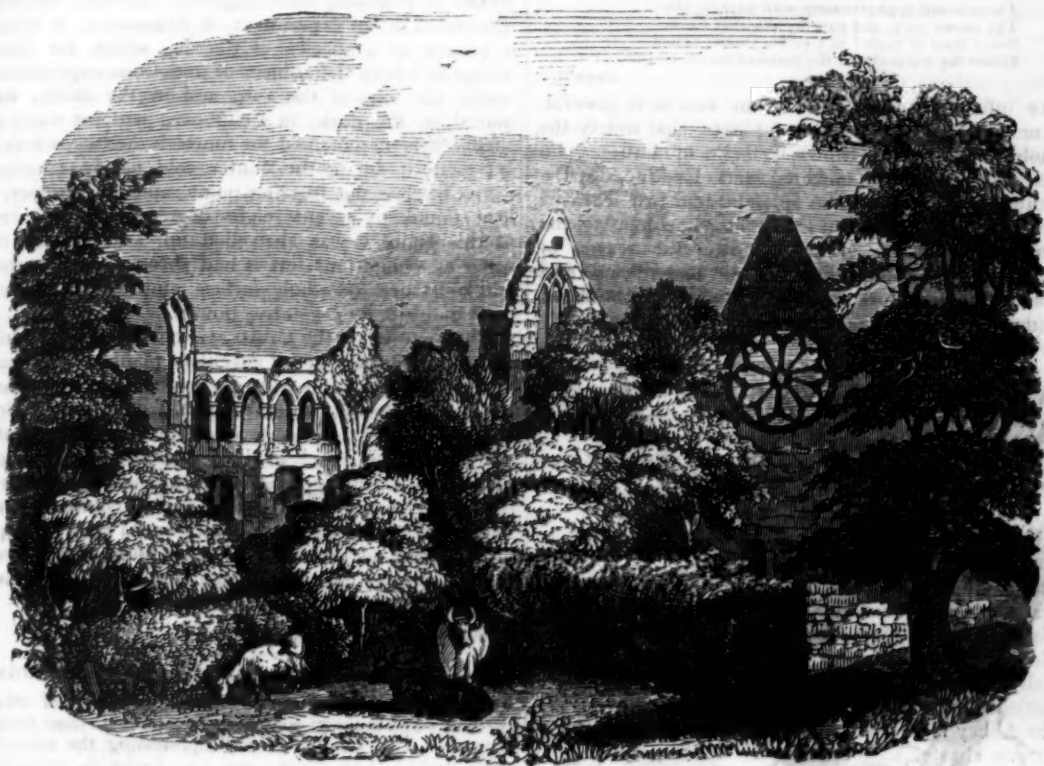
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DRYBURGH ABBEY.



RUINS OF DRYBURGH ABBEY.

THIS noble relic of the olden time stands in a district rife with historical mementos and classic associations; but celebrated as is the spot, it derives its highest—although a melancholy—interest, from its being the last earthly resting-place of the illustrious SIR WALTER SCOTT.

Dryburgh is situated in Berwickshire, about four miles from Melrose, in the most delightful and picturesque part of a sylvan vale. It rises on the north bank of the Tweed, which here makes a bold sweep, and is backed by hills covered with hanging woods of the most luxuriant foliage. When viewed from the opposite bank of the river, the "dark Abbaie," standing amidst the gloom of wood, on a verdant level, above the high banks of earth which confine the course of the rapid stream, sweeping around it, is seen to great advantage; and, whether we contemplate the time-worn ruin, the harmony of nature, or the remembrance of "the years that are past," the landscape is one of singular interest and beauty.

It has been conjectured, that the name of Dryburgh is derived from the Celtic, *Darach-Bruache*, "the bank of the sacred grove of oaks, or the settlement of the Druids;" some vestiges of Pagan worship, (among which was an instrument used for slaughtering the sacrificial victims,) have been found on the Bass-Hill, an eminence in its vicinity, and seem to

strengthen this conjecture. In the early part of the sixth century, a monastery is said to have been founded here by St. Modan, one of the first preachers of Christianity in Scotland. St. Modan was abbot in 522, but it is supposed, that after his death the community was transferred to Melrose*, since no subsequent mention is made of the Abbey till about the year 1150, when the present structure was founded by Hugh de Morville, Constable of Scotland, and Lord of Lauderdale, the district in which it is situated.

According to the "Chronicle of Melros," Beatrix de Beauchamp, wife of the above, obtained a charter of confirmation from David the First, who assumes in the deed the designation of founder, and to this charter Hugh de Morville is a witness; but it sufficiently appears that this Abbey, on its new foundation, owed its establishment to these illustrious subjects, and was afterwards taken under the protection of King David, who was a most munificent patron of the Scottish monastic edifices. The cemetery was consecrated on St. Martin's day, 1150, but the community did not come to reside here until the 13th of December, 1152. The monks were of the Premon-

* Mr. Morton, in his *Monastic Annals of Teviotdale*, observes, that it "was probably destroyed by the ferocious Saxon invaders, under Ida, 'the flame-bearer,' who landed on the coast of Yorkshire, in 547, and, after subduing Northumberland, added this part of Scotland to his dominions, by his victory over the Scots-Britons, at Catnaeth."

stratensian order, and were brought from Alnwick. In 1322, the Abbey was subject to a heavy calamity, a considerable portion being burnt and destroyed by the soldiers under Edward the Second, in revenge for certain insults offered them by the monks, who imprudently rang the church bells on their departure. King Robert Bruce contributed largely to its restoration, but it is doubtful whether it was afterwards rebuilt either in its original style or magnificence. In 1545, Dryburgh Abbey was again plundered and burnt by the English, under the Earl of Hertford.

At the dissolution in 1587, (at which period the lands and revenues were annexed to the Crown), it was erected into a temporal lordship and peerage, by James the Fourth of Scotland, who granted the Abbey and its demesnes to Henry Erskine, created Lord Cardross, the second son of John, Earl of Mar, Lord High Treasurer of Scotland, and Mary, daughter of Esme Stewart, Duke of Lennox, the direct ancestor of David Stewart Erskine, Earl of Buchan, elder brother of Thomas Lord Erskine, Lord Chancellor, and uncle to the present proprietor, Sir David Erskine.

In beholding the ruins in their present state, the usurpation of nature over the works of man is everywhere apparent. The structure is, indeed, completely overgrown with foliage; evergreens may be seen flourishing amidst the solemn desolation of a roofless apartment; in others, the walls are clothed with ivy to their summits; and on the top of some of the arches, trees of considerable growth have sprung up, which add to the adornment of the venerable edifice. The age of these trees is a certain proof of the antiquity of its destruction. The original design of the Abbey was cruciform, divided in the breadth into three parts, by two colonnaded arcades; the transepts and choir have all been short; a part of the north transept which is still standing, is called St. Mary's aisle, and is a beautiful specimen of early English Gothic architecture. The fine Norman arch, originally the western doorway, shown in our view, is enriched with ornaments in general use at the period the Abbey is said to have been founded; the sculpture is chaste, and unaffected by time, and it may, perhaps, be considered the most striking feature of the remains. The monastery is in a state of utter ruin and decay; and nothing is entire but the chapter-house, St. Modan's chapel, and the adjoining passages. The chapter-house is forty-seven feet long, twenty-three broad, and twenty in height; at the east end there are five early English pointed windows; the western extremity contains a circular-headed centre window, with a smaller one on either side. The hall is adorned with a row of intersected arches. Mr. George Smith, architect, states in his valuable and interesting description of the Abbey:—

From a minute inspection of the ruins, we are led to believe that there are portions of the work of a much earlier date. The arch was the distinctive feature of all structures of the middle ages; and among these ruins we observed no fewer than four distinct styles of arches; namely, the massive Roman arch with its square sides; the imposing deep splayed Saxon; the pillared and intersected Norman; and last, the early English pointed arch. These differ not only in design, but in the quality of the materials, and in the execution. The chapter-house and abbot's parlour, with the contiguous domestic dwellings of the monks, we consider of much greater antiquity than the church.

The stone of which the structure is built, is a "hard pinkish-coloured" sandstone, which is in a good state of preservation. A fine tree that still flourishes in the vicinity of the ruins, is supposed to have been planted seven hundred years ago.

The late Earl of Buchan constructed a wire sus-

pension-bridge over the Tweed, at a short distance from the Abbey, two hundred and sixty feet long, of a light and elegant appearance. His lordship, also, erected on the summit of a neighbouring hill, a colossal statue of the hero Wallace, which was placed on its pedestal on the 22nd of September, 1814, the anniversary of the victory at Stirling Bridge, in 1297, and occupies so lofty a situation, that it is visible even from Berwick, a distance of more than thirty miles. The statue is seventy feet high, and formed of red sandstone, painted white.

The late Earl of Buchan, a nobleman of eccentric habits, felt a peculiar interest in the ruins of Dryburgh. He fitted up one of the dilapidated apartments of the Abbey, in a style corresponding to the original, which he called his *sanctissimum*, and to which he frequently resorted. In 1819, we are told by Allan Cunningham, that this nobleman waited upon Lady Scott, when Sir Walter was afflicted with a dangerous illness, "to intercede with her husband to do him the honour of being buried in Dryburgh." "The place," said the Earl, "is very beautiful,—just such a place as the Poet loves;" his lordship, however, became a tenant of the ancient cemetery before the lamented poet. The last resting-place of Sir Walter Scott is a small spot of ground in an area formed by four pillars, in one of the ruined aisles, which belonged to his family. His uncle, Robert Scott, and his lady, are, however, the only members of the family who lie interred there. From the limited dimensions of the place, the body of the author of *Waverley*, has been placed in a direction north and south, instead of the usual fashion; and thus, in death at least, he has resembled the Camerons, of whose character he was supposed to have given such an unfavourable picture in one of his tales. Peace be to his ashes!

In the *Minstrelsy of the Scottish Border*, there is a singular narrative of an unfortunate female, who inhabited a vault amidst the ruins of the Abbey, between eighty and ninety years ago. She was popularly called the Nun of Dryburgh, and from an account she gave of a spirit who used to arrange her habitation at night, whilst she wandered forth to solicit the charity of the neighbouring gentry, it was believed that the vault was haunted; and to this day it is regarded with superstitious dread by the peasantry. During the day-time she immured herself in the vault, but could never be prevailed upon to assign a reason why she adopted so remarkable a course of life. Sir Walter Scott, however, who relates the anecdote, says,—

It is believed that it was occasioned by a vow, that during the absence of a man to whom she was attached, she would never look upon the sun. Her lover never returned. He fell during the civil war of 1745-6, and she never more beheld the light of day.

In concluding our account of Dryburgh, we should not omit to enumerate some of the "ancient ruins," and storied sites, in the immediate vicinity of this enchanting spot. The stately Melrose, whose "broken arches," and "foliated tracery," have been so exquisitely portrayed by the Poet's magic pencil,—the magnificent ruins of Jedburgh and Kelso,—Smailholm Castle, the scene of Sir Walter's childhood,—Abbotsford, where he closed his illustrious career,—the Vale of Glendearg, with its scenes of "faery,"—and the Eildon Hills, from whose three-forked summits, we are told by Scott, that "you may see the scenes of forty-two songs, and ballads, and battles, all of old renown,"—are within the compass of a few days' excursion, and all derive their highest interest from their association with the author of *Waverley*.

GAMBLING IN FRANCE.

I HAD the curiosity to look into a gambling-house in the Palais Royal, Paris, in order to enable me to describe the scenes going on; and all of these "hells," it should be observed, are under the *protection of the Government*. No ceremony was necessary, save that of undergoing the scrutinizing glances of the professional gentlemen, who were exercising their calling, seated round a table, whirling a ball in a kind of hollow dish, and cutting cards. They evidently expected that I would offer to join them; but knowing the excellent proverb in their own language, which says,—"*Ce n'est que le premier pas que coûte*," I took no notice of their significant looks, but continued a spectator of the scene, without the slightest intention or desire to take part in it. Every stranger who was not content, like myself, to be a mere looker-on; but who, instigated by the sight of their tempting gold, seated himself at the table, was sure, I particularly remarked, to be for a short time a winner. After that, the tide, very unaccountably of course, turns against him. He continues to lose faster than he won, and yet continues to play on in fretful desperation, so long as his cash holds out. At length he finds his *plus* converted into *minus*, after which he either decamps completely fleeced for that time, or remains to witness the defeat of others.

Most unquestionably it is most iniquitous in any government to countenance such a vile and unprincipled traffic, alas! the source of so much real private misery and wretchedness, and of such widely-spreading demoralisation; yet one feels quite as much contempt as pity for the besotted dupes of such bare-faced villainy. After all that has been said on the subject, and those exposures made in regard to the system itself, every man of common sense must surely have his eyes open to the consequences; no one, therefore, who is not an unprincipled knave, or a consummate fool, would sit down to a gambling-table. Aye, but say they who apologize for vice, the pursuit is so alluring and fascinating, that the victim is entrapped before he is aware of it. Now this is only an additional reason for eschewing it altogether, with the determination of not suffering even a little curiosity to induce us to make a single experiment. The man who considers whether he shall try his luck at the gambling-table, is lost inevitably. If not ruined in purse, why they become sharpers by profession, monsters hardened in iniquity, bankrupts in character, abandoned in principle, the most corrupt of the corrupt, of the abject the most abject; in fact, it requires the heart of a demon to witness the horrible scenes that occur in these dens or sinks of vice. I shall never forget one mean-attired wretch, who, like others, was at first successful, but, afterwards, losing his gains, became so exasperated, that he threw down Double Napoleons to a great amount; these just shared the fate of the rest, on which was seized with a perfect agony of despair; he stamped his feet, tore his hair, clenched his hands, groaned, and the horrors he thus acted were rendered more thrilling by the fiend-like imperturbability of the human monsters who had plundered him. Their countenances exhibited not the slightest emotion; it was their vocation, and, to do them justice, they appeared most perfectly fitted for it. After witnessing such a display, no one, I think, who was not actually a candidate for Bedlam, would suffer himself to take the chance of being reduced to a similar condition. In such cases, remonstrances are absolutely worse than vain, nor does the victim attempt it; the only intelligible remark he suffers to escape him is,—"*Demain la Morgue*;" indeed, the frequenters of gambling-

houses form no small proportion of those numerous wretches who destroy themselves in Paris. If there be a touch still wanting to this deplorable picture of human folly and depravity combined, it is the truly horrible reflection that such persons are sanctioned and patronized by the Government. More than *Vespasian sordidness* must be theirs, who basely condescend to derive a profit from them, by legalizing the wholesale iniquity and vice. Some will be disposed to think, that, unless it were in the power of the Government to put down gambling altogether, which is of course impossible, it may as well turn to its own advantage the evil it cannot suppress. Miserable, detestable policy! If laws cannot entirely remove the evil, they may do much towards checking it, at least they ought to attempt it. A government cannot prevent a plague or epidemic, yet there is no reason wherefore it should import infection, or aid the progress of contagion. Were there not one gambling-house, or one victim to gambling, the less, on that account, still a government should reject with scorn, even the idea of being accessory, however remotely, to such villany.

Connected with gambling is Suicide; and most awful is the catalogue of those who, in the course of each year, destroy themselves, as the sole remedy for that misery in which they have involved themselves, thereby literally exemplifying the text, "*The wages of sin is death*." Utterly devoid of every kind of religious feeling, unchecked by the slightest moral restraint, detesting the world that renounces them, and utterly abhorring themselves, already feeling all the pangs of hell itself in their bosoms, what wonder is it, I would ask, if, in their desperation, they give themselves up to utter perdition, defy that great Almighty Being who made them, and, rushing headlong on their final destruction, take the fatal "*leap in the dark*?" Truly may these most unhappy men be said to "*Curse God and die*!"

[FROM WILLIAM RAE WILSON'S *Route through France*.]

REFLECTIONS ON QUITTING A CONVENT.

As I mounted my horse to quit the convent, the last beams of the sun were setting, and the forest-trees cast their lengthened shadows along the ground. A cross, the emblem of peace, was placed on a pedestal before the door. The beauty and seclusion of the spot appeared to have marked it out as peculiarly fitted for the enjoyment of tranquil happiness; but the misjudging piety of man had robbed him of those temperate pleasures which nature had so lavishly prepared for his gratification. The oak and fern reminded me of the deep glades of England, and the majestic cypress of Portugal, with its waving branches, impressed the scene with a character of Oriental grace: yet, even on such a calm and heavenly evening, the monks were not allowed to walk beneath the shade of their forest-trees: so active and ingenious were the founders of this convent in devising methods to heighten the privations of its inmates, as if the common course of human passions and anxieties did not render the cup which all must drink sufficiently bitter, without perverting the plainest dictates of common sense to render it still more unpalatable.

[Portugal and Galicia, by an English Nobleman.]

YOUTH beholds happiness gleaming in the prospect. Age looks back on the happiness of youth; and, instead of hopes, seeks its enjoyment in the recollections of hopes.—COLERIDGE

THERE is an active principle in the human soul, that will ever be exerting its faculties to the utmost stretch, in whatever employment, by the accidents of time and place, the general plan of education, or the customs and manners of the age and country, it may happen to find itself engaged.—BLACKSTONE.

OXALIC ACID.

THE name of this acid is derived from a plant, in scientific language called *Oxalis acetosella*. Its common name is *wood-sorrel*. From the juice of this plant oxalic acid may be obtained in considerable quantities, as it may also from that of the *Rumex acetosa*, or *common sorrel*, and the several varieties of *rhubarb*.

Oxalic acid was discovered about sixty years ago by SCHEELÉ, a celebrated Prussian chemist. There is reason to believe that it exists in a much greater number of plants than is generally suspected.

It having been remarked that the shoes of persons who had been walking in a field of chick-peas* were curiously corroded, it occurred to a French chemist that this effect must have been produced by some property possessed by the plant. On cutting off some of the fine hairs of the chick-pea, they were found to yield an acid liquor, which, on further examination, proved to be an aqueous solution of pure oxalic acid. It rarely happens, however, that the acid is found *pure*. In the plants we have mentioned, as furnishing it in the greatest abundance, it almost always occurs in combination either with potash or lime.

Compounds formed of oxalic acid and other substances are denominated *oxalates*. Hence the union of the acid with potash constitutes *oxalate of potash*, with lime, *oxalate of lime*, and so on with many others.

It has lately been ascertained that several kinds of *lichen*†, a species of plants which are generally, although improperly, called *mosses*, contain nearly half their weight of *oxalate of lime*. These plants, we are informed, thrive in barren places, and even on rocks, where no other vegetable could exist for a single day; their peculiar constitution admirably adapting them for preparing the way for a higher order of vegetable life.

By this simple fact we are forcibly reminded that all the operations of Divine Providence are the result of design; exhibiting, in their minutest particulars, special thought and foresight. To an unreflecting observer, the humble lichen just mentioned may appear so insignificant, as scarcely to deserve the name of a plant. Let him not thence infer a waste, or a misapplication, of creative power. The Most High has formed nothing in vain. In the economy of nature an important office has been assigned to the lichen, and for its due performance it is endowed with functions no less remarkable than those of the most fragrant flower, the most beautiful shrub, or the most stately tree. In common with other vegetable productions, the lichen possesses, what may with propriety be termed, a power of *selecting* those particles of matter which are best fitted for its growth and maturity. Man, with all his justly-valued stores of knowledge, would labour in vain, were he to attempt to make *oxalate of lime* out of the materials the lichen has to work with. That little plant "toils not, neither does it spin," but it manifests capabilities for appropriating from the rock, or other surface to which it adheres, from the moisture with which it is occasionally refreshed, and from the atmosphere with which it is surrounded, just what is necessary for its nourishment, whilst that of an opposite tendency is uniformly rejected. At length it falls into decay, and in its place springs up a distinct order of

* The chick-pea is a native of Spain. It is smaller than the common pea.

† Lichens appear in the form of thin flat crusts, covering rocks and the bark of trees, or in foliaceous expansions, or branched like a shrub in miniature. Some of them resemble 'emely, whilst others consist only of a powdery substance.

plants. These owe their existence, on the particular spot they occupy, to the ruins deposited there by their predecessors. Hence we learn, that whilst "we often overlook what is petty, nothing, however small, is deemed worthless, or is disregarded by Him whom no name or language can sufficiently describe, whose power is omnipotence, whose presence is universal, whose knowledge is omniscience, whose creations extend and constitute space, and whose existence is eternity."

Oxalic acid is easily made by dissolving lump-sugar in aqua-fortis (*nitric acid*), a circumstance which has caused it to be sometimes called *acid of sugar*. By the action of nitric acid, many other substances besides sugar are converted into oxalic acid. Of these we may here mention starch, gum, most of the vegetable acids, several varieties of fruit, wool, hair, silk, and the whites of eggs.

To chemists, the composition of oxalic acid is a subject of great interest, and has engaged a very large share of their attention. We fear it would not be so to our general readers, for whose sake we purposely abstain from employing a greater number of chemical, and other scientific terms, than are really necessary.

Those who have read an account of oil of vitriol (*sulphuric acid*)‡, will probably remember that oxygen is there mentioned as imparting to sulphur its acid properties. In the instance before us we are equally indebted to its agency. Oxygen is the acidifying principle in oxalic acid, which contains it combined in certain proportions with carbon (the chemical name for charcoal). The acid crystallizes in slender four and six-sided prisms, which, when quite pure, are perfectly white and very brilliant.

At a temperature of 50°, pure oxalic acid requires about fifteen times its own weight of water to dissolve it; at 57°, nine times its weight is sufficient; the solubility rapidly increasing with the increase of temperature. As the oxalic acid of commerce frequently contains minute quantities of nitric acid, the presence of the latter so greatly facilitates the solvent properties of water, that at 60° it often happens that oxalic acid may be dissolved in twice or three times its weight of that fluid.

Oxalic acid, as may be justly inferred from its name, is *sour*. Its acid properties are so intense, that if one grain be dissolved in 3600 grains of water, there will be sufficient acidity to be perceptible to the taste; and Professor Brande informs us, that in 200,000 (two hundred thousand) times its weight of water, the acid may be detected by means of a very simple test.

The uses of oxalic acid are not very numerous. In the arts, it is chiefly employed by calico-printers, and by straw and Leghorn bonnet-makers. In domestic economy, it is used for cleaning boot-tops. This circumstance, viewed in connexion with the carelessness with which medicines are sometimes vended and taken, and the resemblance which the crystals of the acid bear externally to those of Epsom salt (*sulphate of magnesia*), has occasioned many fatal instances of poisoning. It is gratifying, however, to observe that these accidents occur less frequently than formerly.

Nothing can be easier than to detect an error of the kind to which we have alluded,—by simply tasting the crystals, or, if they have been dissolved, the solution. By doing this, even should it happen to be oxalic acid, no mischief can possibly ensue; and, as that is intensely *sour*, it cannot for a moment be mistaken for Epsom salt, the flavour of which,

‡ See *Saturday Magazine*, Vol. X., p. 139.

although not positively salt or bitter, yet partakes in an eminent degree of both. Moreover, if the crystals of the two substances be closely examined, it will be found that they are not exactly alike, and the exercise even of ordinary caution, first, by observing, and next by tasting, will enable most persons to distinguish the one from the other.

Several acids which are termed poisons, destroy life, when taken into the stomach, solely by their violent action upon the parts with which they come in contact. It seems, however, that oxalic acid is literally a very active poison; instances having occurred in which it has proved fatal when diluted with large quantities of water, and used as an acidulated drink. A quarter of an ounce of the crystals, it is believed, is sufficient to produce death.

It is imperative on those who have occasion for this dangerous material, not only to put it in a place of security, but they ought never to keep it with medicines of any kind. In addition to this, let us impress on them that no circumstances can ever justify them in permitting it to be purchased by children.

When, by accident or design, oxalic acid has been taken or administered, the symptoms of which are great pain, with a burning sensation at the stomach, accompanied by violent retchings, prompt measures are demanded. There may not always be a choice of antidotes at hand, but we will enumerate several, any one of which, if judiciously and instantly applied, might be the means of preserving life. Chalk, whiting, or magnesia, mixed either with warm or cold water, are the best antidotes with which we are acquainted. In the absence of all these, which is not very likely, soda, lime, or even soap and water, may be substituted. The object must be, not only to dislodge the poison from the stomach, but to arrest its influence on the system generally, and this will be effected by the means we have indicated, as oxalic acid forms with lime, magnesia, and soda, salts which are not poisonous. In such a case, however, it is scarcely necessary to remark that no time should be lost in procuring medical assistance. R. R.

WOODY FIBRE,

AS AN ARTICLE OF FOOD.

A MOST important article of vegetable food, however unpromising it may at first sight appear, is LIGNIN, or WOODY FIBRE. It is true, that wood, or saw-dust, does not sound palatable; but when we consider it, spun, as it were, into those delicate tissues of cells and tubes which form the receptacles of the pulp and juices of our most delicious fruits, sometimes yielding an agreeable and crisp resistance, as in the apple; and at others, melting down in a more attenuated form, as in the beurré pear and the peach; or as forming the more substantial skeleton, as it were, of our eatable vegetables, as in the lettuce, cabbage, French bean, and others; we at once see its claims to a place among esculent, and even nutritive principles.

The accumulation of the elements of which woody fibre is composed, by the organic powers of the vegetable world, is something very surprising: the dry timber of an average-sized oak weighs, for instance, about sixty tons; its durability, and its density in some kinds of timber, is also wonderful; so are its uses and applications in the varied forms into which it is elaborated by the hand of Nature; as in hemp, flax, cotton, &c., and the different fabrics into which it is manufactured, such as canvass, linen,

calico, paper, and so forth; giving us cables, ropes, thread, &c.

To the chemist all these things appear still more remarkable, when he finds that the woody fibre, or ligneous part of vegetables, is analogous in composition to the neutral products, starch, gum, and sugar; and that they are in fact mutually convertible; for woody fibre is a hydrate of carbon, regarded in reference to its atomic constitution; so that, assuming, as just stated, that the woody fibre of a moderate-sized oak weighs sixty tons, we have here a consolidation of thirty tons of charcoal or carbon, and thirty tons of water.

When woody fibre comes before us as an article of diet, it has other curious and important bearings. If any form of lignin, such as saw-dust (cleansed from all foreign bodies, such as resin, extractive matter, &c.), rags, or paper, be rubbed up with a little sulphuric acid, taking care that the action of the acid does not go to the extent of charring, and if the acid be afterwards abstracted by adding to the mixture an alkali, or some powdered chalk, it will be found that the wood has been changed into a species of gum: if we now boil this gum for some hours in acidulated water, (imitating the process for the conversion of starch into sugar,) it gradually becomes converted into sugar: hay, straw, leaves, shavings, in short, any form of ligneous fibre, may be similarly converted; and although we do this but clumsily and inconveniently in our laboratories, being, as we are, but Nature's journeymen, Nature herself carries on these transmutations with the most wonderful results, as we see in the ripening of fruits, where the hard woody texture gradually softens down into sweet and luscious pulp, as in the ripening of the pear, the grape, the strawberry, and, in short, almost all fruits.

Lastly, let us look at the effect of heat on wood. If we burn wood in the open air, it undergoes apparent, but far from real, destruction, as we have already remarked: burned with imperfect access of air, its most volatile and combustible parts go off, and its charcoal, or at least a considerable part of it, remains: if distilled, instead of burned, tar, oil, water, and vinegar, are produced; but if pure woody fibre, such as beech saw-dust, from which all soluble matters have been carefully washed out, be reduced to a very fine powder, and then cautiously roasted or baked, it acquires characters not unlike those of corn-flour, and when duly mixed with yeast, or leaven, it ferments, and makes an uniform spongy bread, much more palatable than that usually eaten by the peasantry of many parts of Europe, and infinitely preferable to that which is made in times of scarcity from bran and the husks of corn.

Such is a short outline of the history of the WOODY FIBRE, considered merely in reference to its chemical properties; and should a subject be at any time required for an essay on the power, wisdom, and goodness of God in the works of the creation, a more prolific or apposite one could scarcely be selected.

[Abridged from the Magazine of Popular Science.]

As the harmony and solidity of a building can only be secured by a strict attention to every part of the structure, which can then, and then only, be considered as complete, when nothing can be withdrawn or altered, without a striking injury to the whole; so also in education, if any part whatever be either omitted or displaced, there will always be some defect or obliquity remaining which injures the whole effect.—BISHOP OTTER.

POPULAR LEGENDS AND FICTIONS.

VIII.

SUPERSTITIONS OF THE SHETLANDERS.

MANY of the superstitions of the Shetlanders may be supposed to have descended from their Scandinavian forefathers, and to be parts of that system which prevailed when the heathen worship of Odin, and the belief of Valhalla, prevailed over all the North. But there are other parts of these superstitions which probably had their origin in the peculiar local situation of the Shetlanders, as a people inhabiting a wild and solitary country, and exposed to all the danger and uncertainties of a seafaring life. We accordingly find that the sea-monster called the Kraken, said to appear like a floating island, is still believed to exist; and that mermen and mermaids are said to be seen upon the shores, and around the remote and solitary isles. Seals, and some other animals, are regarded as beings of an intelligent nature, who have come up from a beautiful and splendid world, far below the depth of the ocean; and many curious stories are current of wonderful adventures which certain individuals have had with these incarnate spirits.

Some of these stories are exceedingly amusing, and the reader will find a few such in a work published some years ago by Dr. Hibbert, relative to the Orkney and Shetland Isles. We cannot, however, omit noticing that the Shelt, or Shetland pony, is, as he ought to be, a most important personage in the system of superstition. It is in this shape that they suppose that the god, or spirit, who presides over the waters makes himself visible; and he is also believed to have the power of seeing the ghosts of those who have recently departed:—

When a medical gentleman, (says Dr. Hibbert,) of the last century, was returning home from visiting a female, whom he had left at least alive, the Shelt on which he rode suddenly began to snort and gallop; and, on looking behind him, to see the cause of the alarm, he saw the spectred form of the patient he had visited, and soon afterwards heard of her death, which occurred at the exact time when she took it into her head to frighten the Shelt and his rider.

It was usual with the Shetland sorcerers, like the ancient Scandinavian magicians, to use incantations.

I know a song, (said Odin,) of such virtue, that, were I caught in a storm, I could hush the winds, and render the air perfectly calm.

But the warlocks and witches of Thule used, by the same means, to raise tempests, the lay being accompanied by some simple process that denoted the advancement made towards the attainment of the malevolent object.

About thirty years ago, a woman of the parish of Dunrossness, known to have a deadly enmity against a boat's crew that had set off for the Haaf, took a wooden basin called a *cap*, and allowed it to float on the surface of a tub of water; then, to avoid exciting suspicion, went on with her usual domestic labours, and, as if to lighten the burden of them, sang an old Norse ditty. After a verse or two had been recited, she sent a child to the tub, and bade him tell her if the *cap* was *whummilled*. The little messenger soon returned with the news that there was a strange swell in the water, which caused the bowl to be sadly tossed about. The witch then sang still more loudly, and, for the third time, sent the child to the tub to report the state of the basin, who hastened back with the information that the water was frightfully troubled, and that the *cap* was *whummilled*.

The enchantress, on hearing the fate of the *cap*, with an air of malignant satisfaction, ceased her song, and said, "The turn is done!" On the same

day, news came that a fishing yawl had been lost in the Roust, and that the whole of the crew had been drowned.

A similar story is told of some women in the island of Fetlar, who, when a boat's crew had perished in the bay of Femzie, were detected sitting round a well, muttering mysterious words over a wooden bowl that was supernaturally agitated.

The accompaniment of an incantation by some process indicative of the progress of the magical purpose that is meditated, may be found in many of the wild superstitions of Scandinavia, of which the following is a specimen. While the *Nornies*, or destinies, of Pagan times, were within the recesses of a gloomy cave, dooming, in a wild song, the fate of the warriors who were to fall with the Earl of Orkney in an engagement on the Irish coast, they were employed in a strange loom, where human entrails formed the materials for the warp, foemen's heads for treadles, and swords dipped in gore for shuttles. When the incantation was ended, the women each tore a portion of the cloth, and, mounting their horses, six rode away towards the north, and six to the south.

There is also in Scandinavia an ancient rhyme called the *Quern Song*, wherein two female slaves of a gigantic form sing a strange ditty, while they are employed in labouring in a quern of immense magnitude, in which they grind riches to a sea-king; but being dissatisfied with the oppression of their master, in making them work throughout the whole of the night, they grind against the same warrior a destructive army.

The ceremony practised by Norna of the Fitful Head, for restoring the heart of Minna, as described in the *Pirate* by Sir Walter Scott, by melting lead and dropping it into water, is still in use; as is also that of dropping pieces of money into the chapel of Our Lady. In the island of Foula, Dr. Hibbert's guide endeavoured to point out to him the situation of the brilliant carbuncle, which throws out its native light even amidst the gloom of the darkest night,—a superstitious belief of which the author of the *Pirate* has also made a beautiful application.

In some of the northern islands, the Norwegian, called also the Norse, language, is still spoken. They also retain the ancient usages of the Celts, as described by the oldest and best authors, but with a strong tincture of the feudal constitution. Their *shanachies*, or story-tellers, supply the place of the ancient bards, so famous in history, and are the historians, or rather genealogists, as well as poets, of the nation and family.

ON DIET.

DR. ARNOTT gives the following amusing summary of the powers of the steam-engine, and of the objects upon which they have been employed.

In its present perfect state, the steam-engine appears a thing almost endowed with intelligence. It regulates with perfect accuracy and uniformity the number of its strokes in a given time, and counts and records them moreover, to tell how much work it has done, as a clock records the beats of its pendulum; it regulates the quantity of steam admitted to work, the briskness of the fire, the supply of water to the boiler, the supply of coals to the fire; it opens and shuts its valves with absolute precision as to time and manner; it oils its joints; it takes out any air that may accidentally enter any part that should be vacuum: and when anything goes wrong, which it cannot of itself rectify, it warns its attendants by ringing a bell;—yet, with all these talents, and even when possessing the power of a hundred horses, it is obedient to the hand of a child:—it never tires, and wants no sleep; it is not subject to malady, when originally well made; and only refuses to work, when

worn out with age; it is equally active in all climates, and will do work of any kind;—it is a water-pumper, a miner, a sailor, a cotton-spinner, a weaver, a blacksmith, a miller, &c.; and a small engine, in the character of a steam-pony, may be seen dragging after it on a railroad a hundred tons of merchandise, or a regiment of soldiers, with greater speed than that of our fleetest coaches. It is the king of machines, and a permanent realization of the genii of eastern fable, whose supernatural powers were occasionally at the command of man.

In order, however, that the steam-engine may perform these wonders, and work in any of the capacities which have been enumerated, two things are necessary. The engine must be fed; and as its parts become worn by use, they must be repaired. It must be supplied with coal, wood, charcoal, or other combustible matter, and water, which it converts into power; and when the machinery is injured, what is imperfect must be changed and replaced.

The machinery of the animal frame works under the same conditions. In order that it may energize, it must have food, and that it may not sensibly be deteriorated by use, it must undergo constant repairs. But there is this difference in the two cases. In the animal frame, the source both of its energies and of its structural restoration is one and the same. Its food furnishes both. The blood, which is formed from our food, flowing to the brain, and the muscles, and the stomach, not merely maintains their power, but in addition carries to the same parts, and to all the rest, the materials of their growth and renovation.

The supply of food to the steam-engine, has one purpose only to effect. It is, again, administered with absolute precision as to time and quantity; for it is meted out by those who understand the construction and working of the machinery, who know its wants exactly, and have no bias from prejudice or inclination to supply them otherwise than with rigorous exactness.

The food of human beings, more complicated in its objects, is meted out under much less favourable circumstances. The party who apportions it, for the most part, does not understand the action or the wants of the machine which he undertakes to supply; and what is more, for a long period is not only incurious on the subject, but often disposed to repel any information which may fall in his way. His motive for conveying aliment into his inside is of a totally different complexion to a calculated forethought of the needs of his economy: his exclusive object is to please two senses, and to gratify two appetites;—perhaps he besides takes delight in the whirl into which the machinery is thrown by excess, that fills him with giddy transport, while it endangers and undermines his existence. Well, indeed, may Dr. Beaumont say, "In the present state of civilized society, with the provocatives of the culinary art, and the incentives of highly-seasoned food, brandy, and wines, the temptations to excess in the indulgence of the table are rather too strong to be resisted by poor human nature."

Every one who has reached the middle of life must have had occasion to observe how much his comfort and his powers of exertion depend upon the state of his stomach, and will have lost some of his original indifference to rules of diet. Such rules must especially interest those, who have the care of others,—of children with delicate health,—of the aged, who have ceased to exert their former care and observation of themselves. And if the principles have already been laid down by many writers, no one, it is probable, can attentively reconsider this subject, without seeing some of its bearings more justly and usefully than his predecessors have done.

[Abridged from *Mayo's Philosophy of Living*.]

MARY GRAY'S SONG.

I WALKED by mysel' ower the sweet braes o' Yarrow,
When the earth wi' the gowans o' July was drest;
But the sang o' the bonny burn sounded like sorrow,
Round ilka house cauld as a last Simmer's nest.

I looked through the lift o' the blue smiling morning,
But never ae wee cloud o' mist could I see
On its way up to heaven, the cottage adorning,
Hanging white ower the green o' its sheltering tree.

By the outside I kenned that the inn was forsaken,
That nae tread o' footsteps was heard on the floor;
—O loud cawed the cock whare was nane to awaken,
And the wild raven croaked on the seat by the door.

Sic silence—sic lonesomeness, oh, were bewildering!
I heard nae lass singing when herding her sheep.
I met nae bright garlands o' wee rosy children
Dancing on to the school-house just wakened frae sleep.

I passed by the school-house—when strangers were coming,
Whose windows with glad faces seemed all alive;
Ae moment I hearkened, but heard nae sweet humming,
For a night o' dark vapour can silence the hive.

I passed by the pool where the lasses at daw'ing
Used to bleach their white garments wi' daffin and din;
But the foam in the silence o' Nature was fa'ing,
And nae laughing rose loud through the roar of the din.

I gaed into a small town—when sick o' my roaming—
Whare once played the viol, the tabor, and flute;
'Twas the hour loved by Labour, the saft smiling gloaming,
Yet the green round the Cross-stane was empty and mute.

To the yellow-flowered meadow, and scant'ings o' tillage,
The sheep a' neglected had come frae the glen;
The cushat-dow coo'd in the midst o' the village,
And the swallow had flown to the dwellings o' men!

Sweet Denholm! not thus, when I lived in thy bosom,
Thy heart lay so still the last night o' the week;
Then nane was so weary that love would nae rouse him,
And Grief gaed to dance with a laugh on his cheek.

Sic thoughts wet my een—as the moonshine was beaming,
On the kirk-tower that rose up sae silent and white;
The wan ghastly light on the dial was streaming,
But the still finger told not the hour of the night.

The mirk-time passed slowly in sighing and weeping,
I wakened, and Nature lay silent in mirth;
Ower a' holy Scotland the Sabbath was sleeping,
And Heaven in beauty came down on the earth.

The morning smiled on—but nae kirk-bell was ringing,
Nae plaid or blue bonnet came down frae the hill,
The kirk-door was shut, but nae psalm tune was singing
And I missed the wee voices sae sweet and so shrill.

I looked ower the quiet o' Death's empty dwelling,
The lav'rock walked mute 'mid the sorrowful scene,
And fifty brown hillocks wi' fresh mould were swelling
Ower the kirk-yard o' Denholm, last Simmer sae green.

The infant had died at the breast o' its mither;
The cradle stood still at the mitherless bed;
At play the bairn sunk in the hand o' its brither;
At the fauld on the mountain the shepherd lay dead.

Oh! in Spring-time 'tis eerie, when Winter is over,
And birds should be glinting ower forest and lea,
When the lint-white and mavis the yellow leaves cover,
And nae blackbird sings loud frae the top o' his tree;

But eerier far, when the Spring-land rejoices,
And laughs back to heaven with gratitude bright,
To hearken, and naewhere hear sweet human voices;
When man's soul is dark in the season o' light.

WILSON.

VERILY, old servants are the vouchers of worthy house-keeping: they are like rats in a mansion, or mites in a cheese, bespeaking the antiquity and fatness of their abode.
—WASHINGTON IRVING.

MISUNDERSTANDING and inattention create more uneasiness in the world than deception and artifice, or, at least, their consequences are more universal.—GOETHE.

THE MOUNTAIN OF SALT AT CARDONA, IN SPAIN.

THE City of Cardona, in Catalonia, is famous for the celebrated Salt Mine represented in the Engraving, which is situated close to the river Cardoner, which flows through the valley at its foot. The mountain itself is a mass of salt, four or five hundred feet in height above the level of the river, and extends for a great distance from East to West; on the river-front its sides are nearly perpendicular. That part from which the salt is quarried is about three-quarters of a mile from the town, in a little valley, one side of which faces that part of the mountain which is overlooked by the Castle of Cardona, while the opposite side is surmounted by a circular portion of the same mountain, named the *Bosch del sal*, or "Wood of Salt," because formerly this portion was covered with a wood of fir-trees: at present it is covered with vines, which succeed well in about one foot in depth of vegetable earth, with which the salt is covered. The salt is of various colours in the lump, but when bruised, it is of a beautiful white.

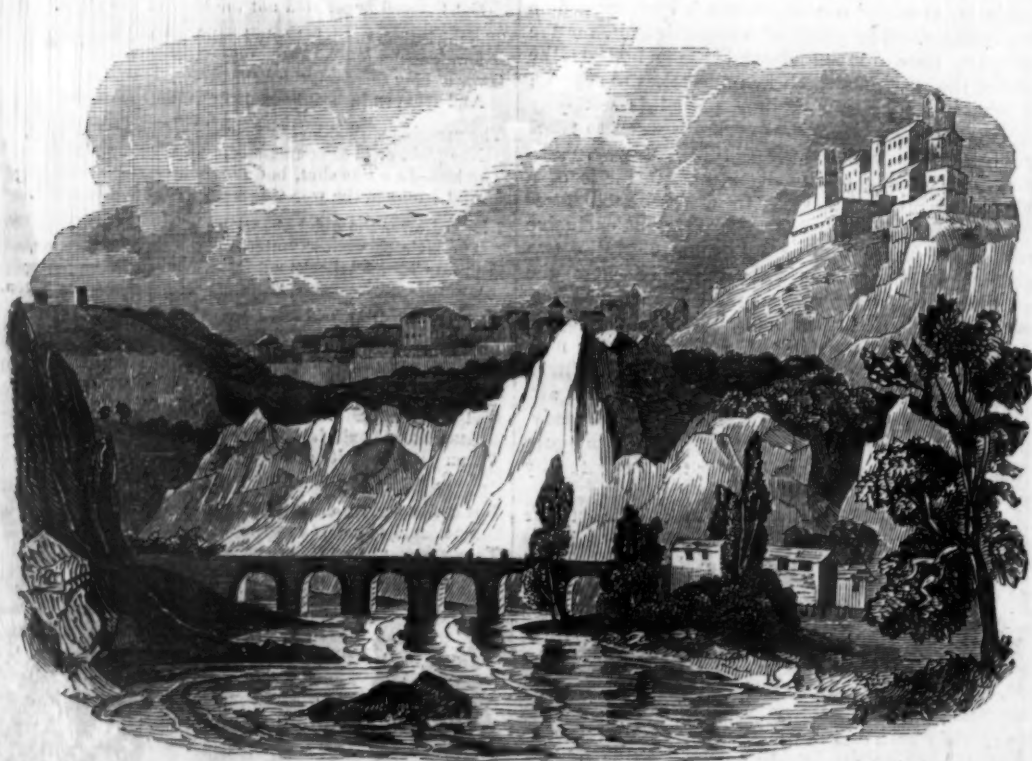
Nothing is comparable to the appearance of the Mountain of Cardona at the rising of the sun, for, in addition to its beautiful outline, it seems to rise from the river like a mountain of precious stones, or an immense group of the brilliant prismatic colours, produced by the rays of the sun when passed through a prism.

I have often regretted (says La Borde,) my inability to convey, by means of the graver, any idea of the brilliant tint which time has impressed on these ancient ruins;—what power can represent the play of the rays of the sun on the reflecting surfaces of this chain of crystal, the dazzling effect of which the eye itself can scarcely support? My visit to this place recalled to my mind what I experienced on visiting the salt-mines of Wieliska, in Poland. I had just left school, and full of the reading of Virgil and Homer, I fancied myself transported to the abode of Tethys, or the Palace of Glass of the Nereids; there I

traversed long galleries, supported by crystal columns, and filled with cabinets of topazes and emeralds; the noise which was made over-head appeared to me to be the sound of the waves of the sea. But the numerous small chapels I passed through, the melancholy light of the lamps which illuminated the statues of St. Nepomucene and St. Florian, the complaints of the poor Polish peasants who worked in these mines, and the noise of hammers and pickaxes, soon undeceived me. But here, in the environs of Cardona, where I could contemplate at a distance that beautiful spectacle of the mountain, as it reared its head in the clear blue sky of Spain, I could fancy that I was gazing on a rainbow fallen to the earth.

This mountain of salt includes the ground on which the town is built, and extends to about three miles round it; one division is called the "Mountain of Red Salt," because the red tint predominates, although in reality the colours vary according to the height of the sun, or the less or greater quantity of rain that has fallen. At the foot of this mountain a fountain of water gushes from a large cavity, which extends from the summit to the base; this fountain discharges itself into the river, which, after heavy rains, becomes so salt as to destroy the fish, but three leagues lower down, the water again recovers its freshness. The whole of the hills are full of crevices, caverns, and even spacious grottoes, filled with salt stalactites, in the form of bunches of grapes of different colours, and with other singularly-formed crystallizations. The inhabitants have an idea, that pieces of this salt are good for the rheumatism, and accordingly employ it for that purpose. Numerous works of art are made by the turner from the more solid pieces, such as crosses, chandeliers, statues of saints, &c.

These salt-works have been worked for a great length of time; they are mentioned in a charter of Bernard Amat, Viscount of Cardona, in the forty-third year of the reign of Philip the First of France, that is, in the year 1103.



SALT MOUNTAIN AT CARDONA.